Fusion3

EDGE 3D Printer
F200 3D Printer

ADVANCED TOPICS: MANUALLY ADJUSTING THE PROBE STEADY-STATE OFFSET

Revision 6/30/2025

MANUALLY ADJUSTING THE PROBE STEADY-STATE OFFSET

How to manually adjust the probe steady-state offset

WARNING: This is for advanced users only! You can really break things if you follow this procedure without understanding what you're doing.

WHY / WHEN TO DO THIS

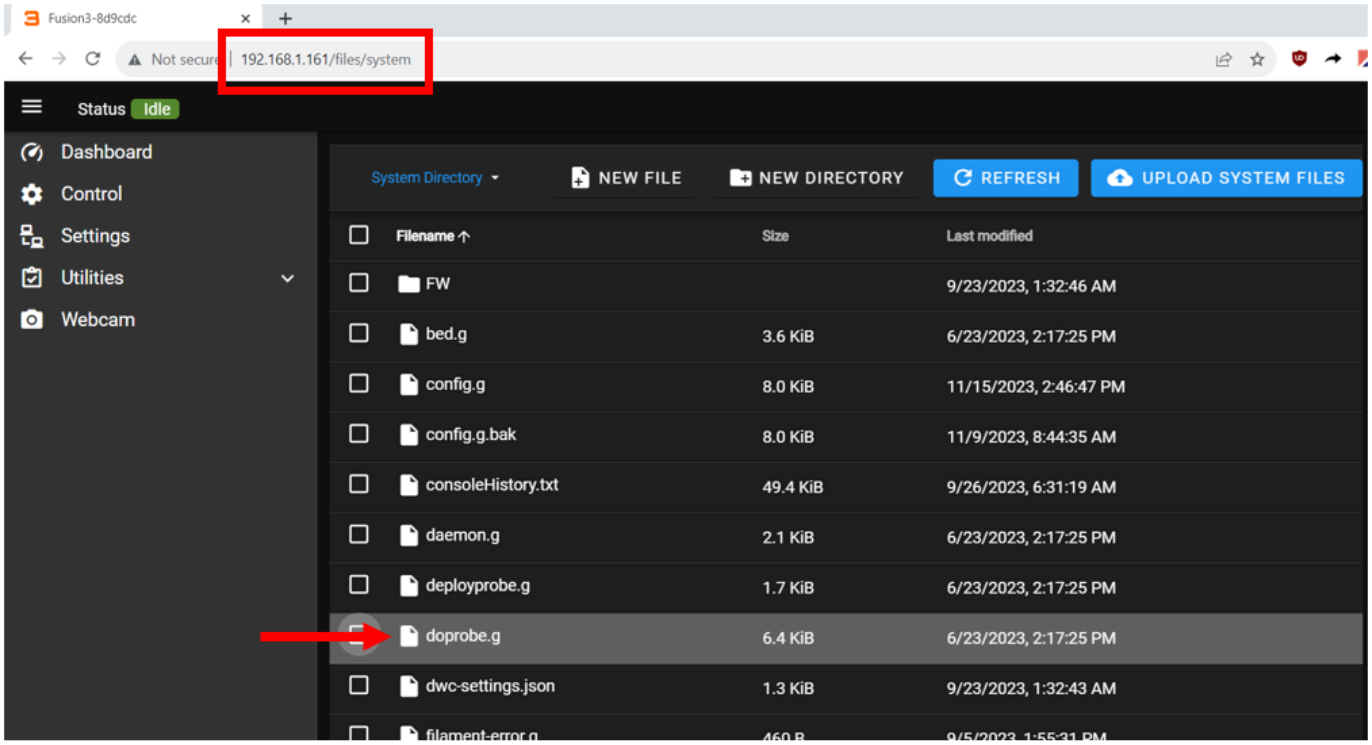
If you consistently find your first layer height is 0.05 to 0.1 too close or too far away.

- Happens on every print or nearly every print
- Consistent across time (days to weeks)
- Consistent across different materials

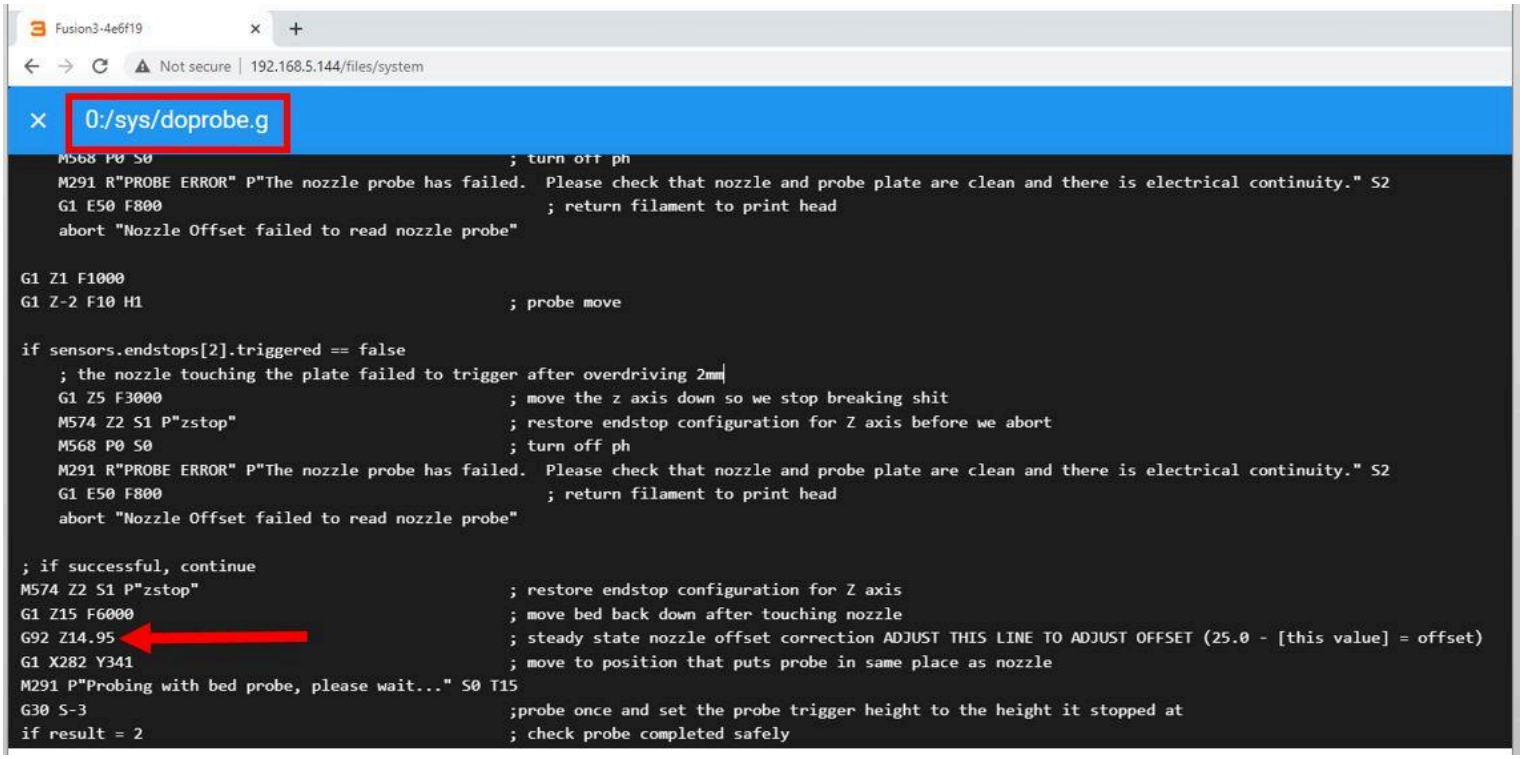
If your first layer is off more than this, something else is going on. Please contact Fusion3 Customer Support vs trying to fix things by going through this procedure.

PROCEDURE

1. You must have the EDGE or F200 connected to your local network and are able to connect to it with your computer.
2. Using a web browser, navigate to "*[printer's ip address]/files/system*"
3. Locate the file called "*doprobe.g*" and open it to edit it. DO NOT execute the file.



4. Locate the line that reads "*G92 Z15.00 ; steady state nozzle offset correction ADJUST THIS LINE TO ADJUST OFFSET (15.0 - [this value] = offset)*" This should be about line 143 on EDGE and line 162 on F200.


Fusion3-4e6f19
Not secure
192.168.5.144/files/system
0:/sys/doprobe.g
M568 P0 S0 ; turn off ph
M291 R"PROBE ERROR" P"The nozzle probe has failed. Please check that nozzle and probe plate are clean and there is electrical continuity." S2
G1 E50 F800 ; return filament to print head
abort "Nozzle Offset failed to read nozzle probe"
G1 Z1 F1000
G1 Z-2 F10 H1 ; probe move
if sensors.endstops[2].triggered == false
; the nozzle touching the plate failed to trigger after overdriving 2mm
G1 Z5 F3000 ; move the z axis down so we stop breaking shit
M574 Z2 S1 P"zstop" ; restore endstop configuration for Z axis before we abort
M568 P0 S0 ; turn off ph
M291 R"PROBE ERROR" P"The nozzle probe has failed. Please check that nozzle and probe plate are clean and there is electrical continuity." S2
G1 E50 F800 ; return filament to print head
abort "Nozzle Offset failed to read nozzle probe"
; if successful, continue
M574 Z2 S1 P"zstop" ; restore endstop configuration for Z axis
G1 Z15 F6000 ; move bed back down after touching nozzle
G92 Z14.95 ; steady state nozzle offset correction ADJUST THIS LINE TO ADJUST OFFSET (25.0 - [this value] = offset)
G1 X282 Y341 ; move to position that puts probe in same place as nozzle
M291 P"Probing with bed probe, please wait..." S0 T15
G30 S-3 ;probe once and set the probe trigger height to the height it stopped at
if result = 2 ; check probe completed safely

5. Adjust the Z-parameter as follows:

    a. Make the number SMALLER to move the print head FURTHER away from the bed on the first layer. (Negative numbers are smaller)

    b. Make the number LARGER to move the print head CLOSER to the bed on the first layer.
    c. Yes, you can make the number > 15 if you need.
6. Save the file.
7. Run another print, or the nozzle offset process standalone, and see if your adjustment had the desired effect.